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         (c) 2006 San Jose Mercury News
File 636:Gale Group Newsletter DB(TM) 1987-2006/Feb 20
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File  95:TEME-Technology & Management 1989-2006/Feb W2
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        (c) 2006 McGraw-Hill Co. Inc

Set     Items   Description
S1     208432   (CALCULAT? OR COMPUTE OR COMPUTES OR COMPUTING OR COMPUTED
           OR DETERMIN? OR TOTALED OR TOTALLED)(2N)(PRICE OR COST)
S2     427269   (AFTER OR PRIOR OR THEN)(3W)(DESPATCH? OR DISPATCH? OR CON-
           NECTED OR INITIALIZED OR INITIALISED OR SHIP? OR SENT OR DISC-
           HARGE? OR TRANSMIT? OR TURN?()ON)
S3         88   S1(20X)S2
S4          4   S3 AND (ENERGY OR OIL OR GAS? OR PETROLEUM OR URANIUM OR U-
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S5          4   RD  (unique items)
S6        135   S1(20N)S2
S7          6   S6 AND (ENERGY OR OIL OR GAS? OR PETROLEUM OR URANIUM OR U-
           TILIT? OR ELECTRIC?)(1W)(MARKET? OR MARKETPLACE? OR PORTFOLIO
           OR EXCHANGE? OR TRADING OR AUCTION? OR FUTURES OR BID? OR EMA-
           RKET? OR E()MARKET? OR INDEX)
S8          4   S5 AND S7
S9          2   S7 NOT S5
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? t9/3,k/all
>>>KWIC option is not available in file(s): 399

9/3,K/1 (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00348330 **Image available**
SYSTEM FOR OPTIMIZING POWER NETWORK DESIGN RELIABILITY
SYSTEME PERMETTANT D'OPTIMISER LA FIABILITE D'UN RESEAU ELECTRIQUE
Patent Applicant/Assignee:
ABB POWER T & D COMPANY INC,
Inventor(s):
OCHOA J Rafael,
HIRT Robert L,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9630843 A1 19961003
Application: WO 96US2592 19960226 (PCT/WO US9602592)
Priority Application: US 95414574 19950331
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AL AM AU BB BG BR CA CN CZ DK EE FI GE HU IS JP KG KP KR LK LR LT LV MD
MG MK MN MX NO NZ PL RO RU SG SI SK TR TT UA UG UZ VN KE LS MW SD SZ UG
AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
BF BJ CF CG CI CM GA GN ML MR NE SN TD TG
Publication Language: English
Fulltext Word Count: 8226
Fulltext Availability:
Detailed Description

Detailed Description
... Basic values
Bulk power interruption index
Bulk power supply average MW
curtailment/disturbance
Bulk power **energy** curtailment **index**
Average values
Number of curtailments/load point
Load curtailed/load point
Duration of load curtailed...shed (reduce) load. Once there is a change in the generation dispatch function (i.e., **after** re- **dispatching**), the total generation costs are different (usually higher) from the base case dispatching costs. Therefore, step S53 will **calculate** the new **cost** of generation and will compare it to the base case to assess the additional cost...

9/3,K/2 (Item 1 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)

01011890 Supplier Number: 40332695 (USE FORMAT 7 FOR FULLTEXT)
FERC Proposes Long-Awaited Rules On Avoided Cost, Bidding, IPPs
International Solar Energy Intelligence Report, v14, n12, pN/A
March 22, 1988
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Newsletter; Trade
Word Count: 1914

... s capacity to the utility's unique needs .... If a utility needs peak load capacity, **then** a non- **dispatchable** QF may not satisfy the utility's needs."
Also important, the proposal notes, "a correctly **determined** avoided **cost** rate must be based on the cost of the least expensive alternative source of capacity...

...the bidding must provide wheeling whether it wins the competitive contest or not. "If a **utility** **bids** , it is hard for it not to win. As a condition of bidding, a utility...
?

? t5/3,k/all
>>>KWIC option is not available in file(s): 399

5/3,K/1 (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00814139
A METHOD FOR MANAGING A UTILITY SERVICE UTILIZING A NETWORK
PROCEDE DE GESTION D'UN SERVICE UTILITAIRE AU MOYEN D'UN RESEAU
Patent Applicant/Assignee:
ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US (Residence), US (Nationality)
Inventor(s):
HOLCOMBE Bradford, 16143 Carden Drive, Odessa, FL 33556, US,
Legal Representative:
HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly LLP, 1400 Page Mill Road, Palo Alto, CA 94304, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200146845 A2 20010628 (WO 0146845)
Application: WO 2000US35256 20001222 (PCT/WO US0035256)
Priority Application: US 99471644 19991223; US 99471961 19991223; US 99472717 19991223
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DZ EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 30502

Fulltext Availability:
Detailed Description

Detailed Description
... applies to a
single energy system user;
Figure 34 illustrates a process for providing a **utility auctioning** system utilizing an internet
protocol network;
Figure 36 is a flowchart depicting a process for...reports can be shown in drop-down menu fashion, and include Resource Cost, Resource Use, **Energy** Cost **Index** , **Energy** Use **Index** , EUIVECI Analysis, EUI Frequency Overview, 24-Month Trend, and Production Report. By using the drop...may include billing a customer for services.

One embodiment of the present invention provides a **utility market** . Pricing information for a utility is received from each of a plurality of utility providers...usage information and the pricing inforniation. A request for payment to the customer for the **calculated cost** of the utility is **then transmitted** utilizing the wide area network. Other operations could include receiving an order for a quantity...in addition to the energy output of an energy generator may be purchased on an **energy market** . Optionally, the **energy market** may be provided by receiving pricing information for energy from each of a plurality of...

5/3,K/2 (Item 1 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

01508814 01-59802
An East coast view: The right price for PJM
Thomas, Samuel C
Public Utilities Fortnightly v135n18 PP: 40-44 Oct 1, 1997

ISSN: 1078-5892 JRNL CODE: PUF
WORD COUNT: 3265

...TEXT: with a zonal pricing idea proposed by PECO Energy and the Coalition for a Competitive **Electric Market** , an ad hoc group including power marketers. Contrary to the impression conveyed by those editorials... reserve sharing and collaborative operations that preserve reliability. There is nothing inconsistent between a competitive **energy market** and coordinated planning and operation designed to achieve these efficiency objectives of pooling. After all...

...the reasons we value competition.

Equally unfounded are criticisms of the operation of a spot **energy market** by the PJM independent system operator. As proposed, the ISO will be truly independent, with no role in the spot **energy market** other than as an administrator. It will neither engage in trades for its own account nor benefit from trades by others. But having the ISO operate a spot **energy market** is the best way that customers in PJM, and their suppliers, can be assured of...LMP effective, given that LMP is calculated after the fact?Yes. LMP is a spot **price** , **determined** from the marginal costs of the generators used in actual dispatch by the ISO. Hence, it is calculated **after dispatch** . Spot prices will vary over time and by location, depending on congestion, demand and thePECO's proposal requires that the ISO "abstain from taking bids in any **energy market** , such as a pool-based power exchange." PECO's ISO would acquire the flexible resource ...

5/3,K/3 (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB

10155866 SUPPLIER NUMBER: 19927502 (USE FORMAT 7 OR 9 FOR FULL TEXT)
An East Coat view: the right price for PJM. (Pennsylvania-New Jersey-Maryland electric power pool)
Thomas, Samuel C.
Public Utilities Fortnightly (1994), 135, n18, 40(5)
Oct 1, 1997
LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 3512 LINE COUNT: 00283

TEXT:
...with a zonal pricing idea proposed by PECO Energy and the Coalition for a Competitive **Electric Market** , an ad hoc group including power marketers. Contrary to the impression conveyed by those editorials...
... reserve sharing and collaborative operations that preserve reliability. There is nothing inconsistent between a competitive **energy market** and coordinated planning and operation designed to achieve these efficiency objectives of pooling. After all competition.
Equally unfounded are criticisms of the operation of a spot **energy market** by the PJM independent system operator. As proposed, the ISO will be truly independent, with no role in the spot **energy market** other than as an administrator. It will neither engage in trades for its own account nor benefit from trades by others. But having the ISO operate a spot **energy market** is the best way that customers in PJM, and their suppliers, can be assured of...LMP effective, given that LMP is calculated after the fact? Yes. LMP is a spot **price** , **determined** from the marginal costs of the generators used in actual dispatch by the ISO. Hence, it is calculated **after dispatch** . Spot prices will vary over time and by location, depending on congestion, demand and the...

...essential service.
PECO's proposal requires that the ISO "abstain from taking bids in any **energy market** , such as a pool-based power exchange." PECO's ISO would acquire the flexible resource...

5/3,K/4 (Item 1 from file: 476)
DIALOG(R)File 476:Financial Times Fulltext

0006531170 B0CAJARAA9FT
Personal View: More power needed in electricity competition
DAVID NEWBERY
Financial Times, P 13
Friday, January 10, 1992
DOCUMENT TYPE: NEWSPAPER LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
Word Count: 952

...price bids one day ahead for each power station to the NGC controller. The controller **computes** the least- **cost** combination of stations to meet demand, informs the companies which plants to hold ready for despatch and **then** , on the day, **despatches** power to meet the varying demand. The 'pool' price for each half hour is then...

...all because of a failure to get the original structure correct.

*Competition in the British **Electricity** Spot **Market** , by Richard Green and David Newbery, Centre for Economic Policy Research, 6 Duke of York...
?

? t5/7/2

5/7/2 (Item 1 from file: 15)

01508814 01-59802
An East coast view: The right price for PJM
Thomas, Samuel C
Public Utilities Fortnightly v135n18 PP: 40-44 Oct 1, 1997 CODEN: PUFNAV ISSN: 1078-5892 JRNL CODE: PUF
DOC TYPE: Journal article LANGUAGE: English LENGTH: 5 Pages
WORD COUNT: 3265

ABSTRACT: Many believe that "locational marginal pricing" (LMP) provides the most accurate, efficient and equitable way to price transmission congestion. Although the Federal Energy Regulatory Commission (FERC) has not yet formally approved the LMP model, it has spoken favorably of the idea. The advantages of LMP are: 1. It recognizes the cost of transmission congestion as the difference between spot prices on two sides of a transmission constraint. 2. It sends accurate price signals, or prices that accurately reflect the cost of power at any location in the Pennsylvania-New Jersey-Maryland Interconnection (PJM). 3. LMP does not discriminate. Common objections to LPM are addressed.

TEXT: Headnote:
Locational marginal pricing, even if "complex," is well worth the benefits.

In two recent issues, PUBLIC UTILIES FORTNIGHTLY featured editorials1 on restructuring of the PJM Pool. Those two articles described proposals by the socalled supporting companies,2 seven members of the Pennsylvania-New JerseyMaryland Interconnection, to use a "locational marginal pricing" model for congestion pricing for electric transmission and to continue PJM as a "tight" power pool. The FORTNIGHTLY compared the LMP model with a zonal pricing idea proposed by PECO Energy and the Coalition for a Competitive **Electric Market** , an ad hoc group including power marketers. Contrary to the impression conveyed by those editorials, however, the facts and the public interest strongly favor the supporting companies and their LMP proposal.

Locational pricing for transmission congestion has been used successfully in one form or another in certain foreign countries for some time now. Many believe, in those countries and in the U.S., that LMP provides the most accurate, efficient and equitable way to price transmission congestion. Indeed, while the Federal Energy Regulatory Commission has not yet formally approved the LMP model as proposed by the supporting companies, it has spoken favorably of the idea: "Ultimately, [it] will promote competitive market mechanisms we are encouraging."3 The FERC repeated that view in its just-issued order in the California restructuring case: "While the Commission recognizes that congestion pricing is complex, we believe that the gains in efficiency outweigh the burden of such complexity."4

Congestion: A Fact of Life Transmission congestion, after all, is a fact of life on interconnected networks. There is not always enough transmission capability to meet all of the demands to move power. When congestion occurs, it becomes impossible to deliver energy from the cheapest sources in one location to users in another location that are served by the congested facilities. As a result, the cost of serving the marginal increment of demand varies among locations. Locational marginal pricing simply recognizes this reality; it does not create it. By contrast, transmission congestion pricing schemes that disregard locational price differences are inefficient and promote attempts by market participants to shift costs to others. This defect, inherent in the PECO pricing proposal, has been made plain by the system operator for PJM. Already, the system operator has determined that interim implementation of the PECO averaging approach has encouraged generators to bypass the operator's dispatch instructions, thus undermining the operator's control.

LMP is not overly complex as some contend. As noted above, the FERC has recognized that any "complexity" is well worth the benefits. Of course, as the editorials noted, some critics disagree. Rather than look at marginal energy prices at different locations on the network, they believe an

approach based on zones is simpler and sufficient. If these critics were correct in their premise-that little or no congestion exists PJM-wide or within the specified zones-then LMP prices would be the same across PJM or within the specified zones. The two methods, LMP and zonal pricing, would produce equal results and prove equally convenient for those buying or selling power in PJM. However, if the critics are wrong-if congestion does cause price differences-then only LMP will accurately reflect those differences, particularly within zones. In 1996 alone, 32 different thermal overload transmission limits occurred on facilities within PJM. Moreover, most of these facilities do not lie at interface boundaries (separating zones) proposed by CCEM. Consequently, prices would have varied within the zones defined by CCEM. Zonal approaches like CCEM's ignore the difficult and judgmental decisions necessary to draw or change zones and the controversies between winners and losers that inevitably will result.

Advantages of LMP

Contrary to some claims, LMP does not bundle energy and transmission. It does not require anyone to buy energy from the transmission provider to get service. Instead, LMP simply recognizes the cost of transmission congestion as the difference between spot prices on two sides of a transmission constraint. CCEM's own expert, Dr. Richard Tabors, expressly acknowledged at the FERC Technical Conference that this is the correct way to price transmission. Correspondingly, if no transmission constraints exist on the system, the spot price of energy will be uniform throughout the pool and the cost of transmission congestion will equal zero. Recognizing the inherent pricing relationship between energy prices in two locations and the value of transmission service between those locations is in no meaningful sense "bundling."

LMP is the only system that sends accurate price signals, prices which accurately reflect the cost of power at any location in PJM. By contrast, proposals like PECO's that are based on price averaging inherently will distort price signals. If prices are averaged, by definition, some will pay too much and others too little. These defects have lead PJM to ask the FERC for authority to modify the PJM Open Access Tariff. The PJM finding indicated that when constraints require the system operator to back down lowcost generation, the faulty price signals given by the PECO proposal encourage those generators to bypass PJM's dispatch instructions and self-schedule, thus limiting the operator's ability to maintain system control.
LMP does not discriminate. Generators are paid and users are charged comparably, based on the true cost of transmission congestion between the injection and delivery points used. If those costs vary by location and use, and they do, then charging everyone the same price, as PECO and CCEM urge, would be discriminatory. Under LMP, a user of firm transmission service will never be worse off than if it served its load with the resources for which it acquired that transmission service, wherever those resources are located. If, as suggested in the editorials, resources close to load do not receive rebates of congestion costs, that is only because those resources were not affected by congestion.

Independent auditors (Price Waterhouse) for PJM unequivocally informed the FERC at its Technical Conference on May 9 that the LMP proposal could be fully audited. That endorsement by Price Waterhouse confirms that LMP does not operate out of a "black box," as some critics have emotionally suggested.

Central Dispatch: Still Competitive Some interested parties have asserted that if the restructured PJM should continue to operate as a tight power pool-as proposed by the supporting companiesthen it will harm competitive markets. This assertion is unfounded. The FERC, the industry and state regulatory commissions have long recognized the efficiencies that can be achieved through central dispatch, reserve sharing and collaborative operations that preserve reliability. There is nothing inconsistent between a competitive **energy market** and coordinated planning and operation designed to achieve these efficiency objectives of pooling. After all, efficiency is one of the reasons we value competition.

Equally unfounded are criticisms of the operation of a spot **energy market** by the PJM independent system operator. As proposed, the ISO will be truly independent, with no role in the spot **energy market** other than

as an administrator. It will neither engage in trades for its own account nor benefit from trades by others. But having the ISO operate a spot energy market is the best way that customers in PJM, and their suppliers, can be assured of competitive prices for balancing and other services necessary for the operation of the PJM control area.

Rather than comment on the proposals of the supporting companies, observers should ask: Why are PECO and CCEM so bent on preventing the ISO from operating a bid-based, day-ahead pool dispatch? Also: Why isn't day-ahead bidding the efficient way for the ISO to acquire the resources it needs for balancing? And: Why not charge or award the locational market-clearing price when generators offer their power for balancing, or when users rely on that balancing? The answers given by PECO and CCEM are not convincing. They suggest a greater concern for the interests of power marketers and other middlemen than they do for consumers.

The supporting companies and their backers have charted the far better course for PJM as it sails toward the future.

Dispelling Myths: A Response to Common Objections

The FORTNIGHTLY'S June 1 editorial, summarizing complaints by critics, listed a dozen so-called "common objections" to LMP. These objections are not wellfounded. To the contrary, there are compelling responses to each of the "common objections" to LMP:

Is LMP too complicated for the real world? No. Many assume that hundreds of different prices will be calculated, one for each node. However, when there is no congestion, the LMP will be the same at every bus. When there is congestion, LMP will accurately reflect differences in the marginal costs of meeting loads at each location. Hence, LMP neither exaggerates the complexity of the real world nor sweeps it under the rug. Any other system would sweep these real differences under the rug.

A different LMP at two busses means that the market price of power is different at the two locations. If these locational differences are commercially significant, then they should be made evident so buyers and sellers can respond. If they are not significant, then traders will ignore them or trade based on averages or other approaches. For example, if there are no LMP differences within a "zone," then traders can conduct "congestion-free" trading in that area. Once the LMP calculation system is set up-it already exists at the PJM ISO-calculating and publishing the LMP is straightforward and simple.

Does LMP cost more than a physical redispatch? No. LMP pays to generators and charges to loads the market-clearing price at their respective locations (for any purchases and sales of spot energy), while charging transmission users the difference in LMP (if any) as a congestion charge. Each LMP is based on the marginal cost of meeting load at each location.

In a competitive market, the "cost" of congestion could not effectively be limited to only the incremental physical redispatch costs of the generator or generators dispatched out of merit. All other generators in the constrained area would rationally attempt to increase their bids up to that market-clearing price. PECO's proposal ignores this latter effect and thus greatly understates even the costs of physical redispatch. In addition, the effects of congestion include not only the increased costs from bringing on higher-cost generation in constrained areas, but also the decreased cost of generation in the unconstrained areas. PECO's averaging scheme denies customers in these areas the benefits of the lower costs.

Congestion costs likely will vary significantly over time, as loads, the transmission system and market conditions change. Consequently, the choice of a congestion pricing method should turn on the merits of the method, not speculation about the size of congestion.

Does LMP bundle energy with transmission? No. LMP determines the market-clearing price of spot energy at each location. As Schweppe, et al, demonstrated, differences in spot energy prices define the transmission price (or congestion charge) between any two locations.

The FERC prohibits bundling that requires a participant to buy one product

in order to buy another. However, under the proposal, market participants can purchase transmission separately without having to purchase energy from the ISO's spot market. Moreover, the proposal allows the ownership of transmission "rights" (fixed transmission rights) to be separated from the actual use (or dispatch) of the grid. That is, a trader does not have to acquire the FTRs that match its actual or expected trade. The FTRs merely define the degree of financial hedging the trader has for its trade. Other proposals (CCEM's physical rights approach) force traders to acquire the transmission rights that match their energy trades as a condition for using the grid. This "bundling" is both unnecessary and more expensive for traders, because it requires additional bilateral trading to acquire the correct rights.

Transmission use and the dispatch of generation are intrinsically inseparable. That is, defining transmission usage implicitly defines the dispatch of generation and loads at each location, and defining the dispatch of generation and loads at every location implicitly defines transmission usage.

Does LMP hinder forward and secondary markets? No. Having an efficient, spot-market clearing price at each location facilitates forward and secondary markets, because it gives market participants a transparent reference price to judge the value of such trades. Alternative proposals would eliminate or obscure these efficient price signals.

A related issue is whether defining financial hedging contractscalled FTRs by the supporting companies-between each location makes trading of such transmission congestion contracts difficult. It does not. Since FTRs are financial rights to congestion credits, or dollars, trading to acquire the desired level of hedging will be easy This common basis for all FTRs facilitates forward and secondary markets for transmission. This is not true of CCEM's physical transmission rights proposal, which requires that each trader have exactly the physical right-in size, time and location-that matches its trade.

Does the proposal misallocate transmission rights? No. FTRs would go to those who purchase network service and firm point-topoint service as defined in the FERC pro forma tariff. Both sets of transmission users will thus share in paying the embedded costs of the transmission system, so they should both receive the benefits. FTRs ensure that these customers pay no more for energy than if they were served by their own (or contracted) resource.

Does the allocation of FIRs discriminate against utilities with plants close to load? No. The allocation does not distinguish between municipal or investorowned utilities. Some utility (both muni and IOU) resources are close to loads; some are not. For utilities using network service, FURs are assigned from the resources each utility designates as its network capacity resource to its load. Similarly, for firm point-to-point customers, an FTR is assigned from the source location to the load location.
If a designated resource is close to the load, then the differences in LMPs typically will be none or small, so the "value of the FTR" is also none or small. However, since the LMP difference is none or small, the need for a financial hedge is also none or small. Similarly, high-value HRs are needed to hedge energy costs from remote resources at locations with much lower LMPs relative to the load location.

Some utilities will have to designate resources close to load, because that is what they own or have under contract. The associated -TRs obviously will not hedge trades from undesignated remote low-cost generators. To hedge these latter trades, the utility can purchase firm point-topoint transmission between that resource and the utility's load and receive the corresponding FTR. That FTR will hedge the utility for the trade and allow it to receive the benefit of the remote low-cost generator. Asking such a utility to pay for this firm transmission (and help pay for embedded costs) to get the FTR is not discriminatory; it's fair.

Does the FTR allocation system exclude marketers? No. Marketers can purchase either firm network or firm point-topoint service from their sources to loads. In exchange for paying a share of the embedded cost, they receive FTRs from the sources to the loads. Second, they can purchase existing FTRs owned by others in a secondary market at market price. In the

future, marketers will also be able to acquire FTRs in an auction.

Can a municipal utility designate resources under purchased power contracts as the source for an FT? Yes.

Is the price signal from LMP effective, given that LMP is calculated after the fact?Yes. LMP is a spot **price** , **determined** from the marginal costs of the generators used in actual dispatch by the ISO. Hence, it is calculated **after dispatch** . Spot prices will vary over time and by location, depending on congestion, demand and the mix and costs of generators available in each area for dispatch. Expected LMPs will be aS calculated and published dayahead by the ISO. Final LMPs also will be published. Given this price transparency, over time market participants will be able to anticipate LMP changes and locational differences and respond efficiently

Can LMP be audited? Yes. Will LMP encourage new transmission? Yes, when it is economic. Traders will pay congestion charges based on differences in LMP between the load and source locations. When the congestion charges exceed the costs of expanding the system to relieve the congestion, expansions will become economic. Those who would otherwise pay the charges (or pay higher LMPs)-such as loads in constrained areas-will have an incentive to pay for expansions to avoid the charges and get cheaper energy. Generators in unconstrained areas will have an incentive to pay for expansions to sell power into constrained areas with higher prices without paying the congestion charges. LMP creates efficient incentives for suppliers, users and investors.

Does basing congestion charges on LMP differences violate FERC's policy against "and"pricing? No. FERC recently ruled (in the California case) that LMP-based congestion pricing is acceptable and not a violation of "and" pricing principles.

Does LMP create or exacerbate market power? No. LMP makes market power easier to detect and thus harder to exercise. LMP reveals the higher prices that a generator with market power might charge in constrained areas. This allows demand responses in the constrained area to dilute the price and mitigate the market power. Other approaches that average prices hide the generator's higher price in the average and dilute the demand responses, obscuring market power.

Should the ISO "abstain from taking bids"for its balancing service? No. A voluntary, dayahead bidding process is an efficient, competitive way for the ISO to acquire the resources it needs to balance the system, an essential service. The proposal would allow generators the option of submitting bids to the ISO each day. The ISO would then select the leastcost mix of day-ahead bids as the resources for real-time dispatch needed for system balancing. This ensures the lowest cost for this essential service.

PECO's proposal requires that the ISO "abstain from taking bids in any **energy market** , such as a pool-based power exchange." PECO's ISO would acquire the flexible resource it needs for system balancing and congestion management by asking some generators to sign "call contracts" weeks or months in advance. If a generator that was not under a "call contract" offered a cheaper resource to the ISO the day before the dispatch, then PECO's ISO would refuse to consider it. Or would it? If the ISO turned these offers down, then it would be rejecting lower-cost generation and needlessly raising the cost of the balancing service. If PECO's ISO accepted these day-ahead bids to lower its balancing service costs, then the process would be no different from the proposalthe way the PJM ISO works today.

So what's wrong with a voluntary day-ahead bidding process and paying the winners the market-clearing price for the energy they provide? The only objection PECO and some marketers have raised is that this process might be more efficient than the competing services they would like to provide. That is not a valid reason.

Footnote:

1 "PJM's Brave New World," PUBLIC UTILITES FORTNIGHTLY, June 1,1997, p. 4

and "Power Pools: Wired Too Tight? PUBLIC UTILITIES FORTNIGITLY, August 1997, p. 4.

2 The PJM supporting companies are Public Service Electric and Gas Co., Pennsylvania Power & Light Co., Baltimore Gas & Electric Co., Jersey Central Power & Light Co., Metropolitan Edison Co., Pennsylvania Electric Co., Potomac Electric Power Co., Atlantic City Electric Co., and Delmarva Power & Light Co. Jersey Central, Met Ed, and Pennelec are subsidiaries of GPU Inc. 3Mid-Continent Area Power Pool, 78 FERC (para) 61,203 at 61,883 (1997). 4Pacific Gas & Electric Co., Order Providing Guidance and Establishing Procedures, Docket Nos. EC9619-003 and ER96-1663-003 (July 30,1997).

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